smoke during pregnancy. Cord blood concentrations of biochemical markers were determined by immunoenzymatic methods and data analyses were performed using SPSS statistical software version 17.1. The study was approved by the Ethics Committee at the Institute of Mother and Child.

The newborns of smoking mothers had significantly higher concentrations of cord serum ox-LDL, TOC and GSSG (p<0.001), but lower levels of GSH/GSSG ratio (p<0.05) compared with newborns of non-smoking women. The levels of GSH were similar in both studied groups. Additionally, cord serum GSSG as well as TOC levels positively correlated with number of cigarettes daily consumed by the mother (r=0.49, r=0.43; p<0.05) and cotinine serum concentration (r=0.52, r=0.43; p<0.05), respectively.

Maternal smoking enhances oxidative status and depletes antioxidant potential in neonates exposed in utero to tobacco smoke. The relationship between the concentration of TOC, GSSG and the markers estimated intensity of cigarette smoking seems to confirm that the oxidant-antioxidant balance disorder in newborns is a direct result of tobacco smoke inhalation.

133 ANTHROPOMETRIC INDICATORS AND VITAMIN D LEVEL IN NEWBORNS FROM WOMEN WITH GESTATIONAL DIABETESMELLITUS
Natalya Verioskina*, Kyryanova Victoria, Klimov Leonid, Atanesyan Roza, Bobryshev Dmitri, Petrosyan Meline. «Stavropol State Medical University» The Ministry of Health, Stavropol, Russia
10.1136/archdischild-2021-europaediatrics.133

Introduction maternal hyperglycaemia during pregnancy is one of the factors of epigenetic modifications.

Objective of the study: a comparative analysis of anthropometric data and 25(OH)D level in newborns depending on the glycemic target level of the mother with GDM.

Methods 66 newborns were examined: first group – 16 (24.2%) babies from mothers with GDM with glycemia in the III trimester of less than 5.1 mmol/L; second group – 20 (30.3%) from mothers with GDM with glycemia more than 5.1 mmol/L. Control group – 30 (45.5%) babies.

Results First and control groups: maternal glucose – 4.2 [4.0–4.3] mmol/L and 4.1 [3.6–4.6] mmol/L (p>0.05) respectively; body weight of newborns was 3,650 [2,350–4,280] grams and 3,345 [3,050–3,600] grams (p>0.05), length 53.0 [47.0–54.0] cm and 51.5 [50.0–53.0] cm (p>0.05), head circumference – 36.0 [33.0–37.0] cm and 35.5 [33.0–36.0] cm (p>0.05) and 25(OH)D level is 14.6 [4.6–17.3] ng/ml and 14.5 [7.9–21.7] ng/ml (p>0.05) respectively.

Second group versus the control group: maternal glucose is 6.9 [5.7–7.8] mmol/L (p<0.001); weight of newborns – 3,830 [3,150–4,220] grams (p<0.05); length – 33.5 [30.5–35.0] cm (p>0.05), head circumference – 36.0 [35.0–38.0] cm (p>0.05); 25(OH)D – 6.9 [5.7–7.8] ng/ml (p<0.05).

Severe deficiency of 25(OH)D in newborns from the first and second groups was detected in 5 (33.3%) and 10 (50.0%), deficiency – in 6 (40.0%) and 7 (35.0%), insufficiency – in 4 (26.7%) and 3 (15.0%) babies respectively.

Newborns from mothers with GDM with glucose more than 5.1 mmol/L had significantly higher body weight and a low level of 25(OH)D than in the control group. Babies from mothers with GDM have poorer vitamin D level than healthy newborn babies.

134 NEONATAL SEPSIS: CURRENT INFORMATION AND HOW WE ARE DOING?
Shauna Quinn*, Daithi Kilgariff, Noel Friesen. St John of God Midland Paediatric Department, Perth
10.1136/archdischild-2021-europaediatrics.134

Early neonatal sepsis is defined as sepsis within the first 7 days of life.

There is an incidence of 0.1–1.2/1000 live births, with variation between populations. A significant reduction in GBS sepsis is recognised with introduction of intrapartum antibiotics. Predisposing risk factors include PROM, history of GBS sepsis, chorioamnionitis, prematurity and inadequate intrapartum antibiotics. The aim of this audit is to compare adequate and inadequate treatment of GBS +ve and PROM mothers and subsequent neonatal outcomes with consideration of the EOS risk calculator.

The study cohort consists of 114 neonates born at St John of God Midland between January and March. It is a retrospective review of all neonates screened during this period, with clinical data and results from Australian Clinical Labs, Infomedix and iSoft.

Of all 114 neonates screened, all were screened with a CRP and 68 with additional blood cultures. Results demonstrated one positive blood culture for S. Epidermidis, one sepsis with chorio positive growth and two presumed cases of chorioamnionitis with no growth. 50% of those screened were treated until Mid-February, where-after there was an increase noted likely secondary to medical changeover. Amongst those screened, 66% were empirically treated and 24% treated following a CRP rise. We identified an issue regarding insufficient antepartum antibiotics (<4 hours). 32% of mothers were GBS+ve but only 8% received adequate antibiotics and 24% were treated inadequately.

Similarly, in PROM >18 hours only 44% received adequate treatment despite inpatient management for > 4 hours prior to birth. All 15 neonates born to inadequately treated mothers, were screened, two treated for CRP rises and two treated for additional risk factors.

This review highlights the importance of documentation, with inclusion of rupture of membrane and antibiotic administration times, gathering data required for the EOS calculator and liaising with the obstetric team to ensure timely administration of antibiotics. We can reduce screening and treating of neonates by optimising antepartum management or use of the EOS calculator.

135 CHRONIC RENAL FAILURE AFTER SINGLE FETAL DEMISE IN MONOCHORIONIC TWINS – CASE REPORT
Ana Kocijan Rebrovic*, Mirta Starcevic. University hospital centre Zagreb
10.1136/archdischild-2021-europaediatrics.135

Introduction Monochorionic twins have higher rates of growth discordance, fetal loss, extreme prematurity and neonatal morbidity in general, when compared to the other types of twins. Intrauterine death of one monochorionic twin can lead to
serious complications in the surviving one, with chronic renal failure being extremely rare, but possible.

Case Report It was the second pregnancy of a 35-year-old mother, conceived by assisted reproductive technology. Subsequent division of one of the two initially inserted blastocysts resulted in monochorionic twins, the triplets then continued to develop. By the 31st week, the otherwise healthy pregnancy had been complicated by the intrauterine death of one of the monochorionic twins, while the other one remained vital; slightly smaller amount of amniotic fluid was recorded in the surviving twin.

Emergency caesarean section was performed at 33 weeks' gestation, due to the pathologic cardiotocogram of the first triplet. Our patient, the surviving male twin was born vital (Apgar score 8, 8), weighing 1800 g. Initial laboratory findings were all normal, but the patient was oliguric (1.6 ml/kg/h); continuous increase of body weight was observed. Repeated laboratory findings in the fourth day of life indicated severely impaired renal function (urea 18.7, creatinine 382, Na 115, Cl 83, Hb 128, Htc 0.38). An ultrasound of the urinary tract revealed small and structurally altered kidneys. Initial conservative treatment (electrolyte replacement, fluid management) was followed by hemodialysis, and in the end, peritoneal dialysis, which was continued after the discharge at the 86th day of life, together with symptomatic and supportive treatment. Over the past few months, there have been no acute illnesses or complications, and the child’s growth and development are satisfactory. However, it is to be expected that the child will need a kidney transplant in the future.

Conclusion In the case of single fetal demise in monochorionic twin pregnancy, it is possible to expect severe kidney damage in the surviving twin, with a poor long-term outcome.

SHORT-TERM OUTCOMES FOR PRETERM INFANTS WITH SURGICAL NECROTIZING ENTEROCOLITIS

University Hospital Centre Zagreb, University of Zagreb, School of Medicine

Goal The purpose of this study was to characterize the population and evaluate risk factors, surgical treatments and short-term outcomes in preterm infants with surgical necrotizing enterocolitis (NEC).

Methods We retrospectively evaluated premature infants with surgical NEC over a period of 5 years (2015-2019) in a Croatian tertiary referral centre. Data were extracted from medical records.

Results This study included 23 outborns aged 23 to 36 weeks of gestation (27.7±3.7). The median age at surgery was 11 days (5-43 days). Male gender (83%) was overrepresented, whereas antenatal steroid exposure was low (61%). The majority of patients (n=15) had a primary laparotomy (65%); two patients had peritoneal drainage (PD) alone (9%) and six patients had PD followed by laparotomy (26%). All patients survived. After referral, the median length of hospitalization was 128 days (15-430 days), one patient developed short bowel syndrome, five (22%) were treated for sepsis, eight patients (35%) received laser photocoagulation due to retinopathy, and grade 3 to 4 intraventricular hemorrhages were diagnosed in seven (30%) patients. There were no differences in outcomes related to surgical approach.

Conclusion NEC mortality in our cohort is lower than current literature suggests. Additionally, abdominal drainage seems to be equally successful treatment of NEC as explorative laparotomy and bowel resection in neonates who do not meet the criteria for the latter procedures. Neonates who underwent abdominal drainage do not show increased probability of complications or higher lethality.

136 EARLY NEONATAL OUTCOME OF NEWBORNS WITH MOTHERS HYPOTHYREOSIS IN PREGNANCY

Diana Milas*, Gordana Lukić, Tihana Nađ, Andrea Prutki. OZB VIKOVAR, Medicinski fakultet Osijek

Newborns of mothers with hypothyroidism (latent or manifest) in pregnancy were investigated during two one-year periods. The aim was to point out particularities in mother’s anamnesis, pregnancy and labour, as well as the clinical characteristics of neonates (Apgar score, gestational age, birth weight, mode of delivery) and to compare the differences in two periods.

Subjects The research was conducted on newborns of mothers with hypothyroidism in pregnancy in the Clinical Hospital Centre Osijek in 2015 and 2018. The control group consisted of newborns first born afterwards.

The data were presented in tables, in absolute and relative frequencies. Chi-square test was used to demonstrate the statistical significance, resulting in significance level of p < 0.05. It was retrospective case control study. Mothers with hypothyroidism in pregnancy had more acute complications in pregnancy (infections, hypertension, pre-eclampsia, gestational diabetes) and delivery, and more complications in reproductive anamneses. Urgent Caesarean section was much more common for their newborns. C-reactive protein among them was often higher than 5 mg/l. They gave birth prematurely more often, while infections, cyanosis, hypo- and hypertonus, and jaundice were also more common. Complications of prematurity and the need for oxygenation occurred much more often than in the control group. They were also hospitalized longer. Comparing the two one-year periods, we found less complications during pregnancy and delivery in the year 2018; the frequency of mothers with bad reproductive anamnesis was three times lower, as was the number of urgent Caesarean sections. The number of newborns born prematurely was two times smaller. In 2018, neonatal outcome included three times less common onset of infection, cyanosis, hypo- and hypertonus, and less common preterm labour. The need for oxygenation was five times, and for prolonged hospitalisation nine times less common.

Conclusion Better perinatal care and screening of mothers with hypothyroidism improves neonatal outcome as well as long-life consequences in newborns and lowers the complication rates for mothers during pregnancy and delivery.